REMARKS

The Office Action dated March 17, 2009 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 19, 63 and 69 have been cancelled and their contents have been incorporated into amended independent claims 24, 61 and 17, respectively. Claim 66 has also been amended in a similar manner. No new matter has been added and no new issues have been raised which require additional consideration or search. Claims 17, 18, 20, 24, 25, 56 and 58-62, 64-68 and 70-73 are presently pending in the application and are submitted for consideration. Withdrawn claims are also pending, but not submitted for consideration.

Claims 17-20, 24, 25, 56 and 58-73 were rejected under 35 U.S.C. §103(a) as being unpatentable over IEEE Std. 802.16-2001 (IEEE) in view of Laakso (U.S. Patent No. 6,671;512). The Office Action took the position that IEEE Std. 802.16-2001 discloses all of the elements of the claims, with the exception of monitoring by a base station at least one of capacity request messages received, capacity grant messages sent and data transmission received from a subscriber station. The Office Action then cited Laakso as allegedly curing this deficiency in IEEE Std. 802.16-2001. This rejection is respectfully traversed for at least the following reasons.

Claim 17, upon which claims 68 depends, is generally directed to an apparatus that includes a granting means for granting a transmission capacity subscriber station-

specifically, a transmitting means for transmitting capacity grant messages to at least one subscriber station, and a monitoring means for monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations. The apparatus also includes avoiding means for avoiding mismatch between a granted capacity and data received from a subscriber station using information based on the request messages, the capacity grant messages and the received transmissions.

Claim 20, upon which claims 70-71 depend, is generally directed to an apparatus that includes a first transmitting means for transmitting capacity request messages of at least one connection and a receiving means for receiving capacity grant messages from a base station. The apparatus also includes an allocating means for connection-specifically allocating a capacity granted by the base station, a second transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and a third transmitting means for transmitting data according to a capacity allocation made by the subscriber station.

Claim 24, upon which claims 18 and 72 depend, is generally directed to an apparatus that includes a receiver configured to receive capacity request messages from at least one subscriber station and a processor. The processor is configured to grant a transmission capacity subscriber station-specifically, transmit capacity grant messages to the at least one subscriber station, and monitor request messages received from the at least one subscriber stations, capacity grant messages sent by a base station and data

transmissions received from the at least one subscriber station. The processor is also configured to avoid a mismatch between a granted capacity and data received from a subscriber station using information based on request messages, capacity grant messages and received transmissions.

Claim 56, upon which claims 58-60 depend, is generally directed to a method that includes transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The method also includes a transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 61, upon which claims 62-63 depend, is generally directed to a method that includes granting a transmission capacity subscriber station-specifically and transmitting capacity grant messages to at least one subscriber station. The method also includes monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations. The monitoring includes using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

Claim 64, upon which claim 65 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The operations also include transmitting messages, wherein the messages include information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 66, upon which claim 67 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, and granting a transmission capacity subscriber station-specifically. The operations also include transmitting capacity grant messages to at least one subscriber station, and monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations. The monitoring includes using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

As will be discussed below, the combination of IEEE Std. 802.16-2001 (IEEE) and Laakso fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above. The rejection is respectfully traversed for at least the following reasons.

IEEE generally discloses a standard for an air interface of stationary broadband wireless access systems. The standard includes a medium access control layer that is capable of supporting physical layer specifications, and a particular physical layer specification that is applicable to systems that operate between 10 and 66 Gigahertz.

The Office Action admitted that IEEE is deficient with respect to each of the claim recitations recited in independent claims 17 and 61 (see page 3, last two lines of the Office Action dated March 17, 2009). The Office Action then relied on the disclosure of Laakso as allegedly curing those deficiencies of IEEE. In particular, the Office Action alleged that Laakso discloses "monitoring by the base station of at least one of capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station, and data transmission received from the at least one subscriber stations", and relied on the Abstract and columns 2, 4 and 10 of Laakso for support. Applicants disagree and submit that Laakso does not cure the deficiencies of IEEE with respect to claims 17 and 61. For example, Laakso fails to disclose or suggest "avoiding mismatch between a granted capacity and data received from a subscriber station using information based on the request messages, the capacity grant messages and the received transmissions", as recited in claim 17 and similarly recited in claim 61.

Laakso discloses a telecommunication network where, not only speech is transmitted, but other data may also be exchanged. In such a network, the more subscribers that are registered within and the more data transmitted, the higher the traffic load that will be imposed on the network. However, the maximum traffic capacity that can be managed by the network is limited by the available radio resources (RR). If the traffic load is continuously increasing, the system may become overloaded and may not be capable of managing all of the network traffic. In one scenario, an overloaded network may collapse and all ongoing communication links will be broken (see paragraphs [0004]-[0008] of Laakso).

Laakso further discloses a method for traffic load control that includes a series of operations. Those operations include: setting a first reference load value for the load of a respective cell, monitoring the load of the respective cell, and, in response to the load exceeding the first reference load value, manipulating the power control to decrease the transmission power levels in the cell (see paragraph [0010] of Laakso). In other words, Laakso discloses a traffic control method aimed at load monitoring to avoid overloading a network and its eventual communication failure. Laakso is silent regarding "avoiding mismatch between a granted capacity and data received from a subscriber station using information based on the request messages, the capacity grant messages and the received transmissions", as recited in claim 17 and similarly recited in claim 61. The New Oxford Thesaurus provides synonyms to "mismatch", such as, inconsistency, conflict and discrepancy. Such a consideration for avoiding mismatch between the capacity granted

and the data received form a subscriber is simply not performed by Laakso. At best, Laakso simply monitors traffic load and provides a method to reduce the traffic load.

In addition to the above-noted deficiencies of Laakso and IEEE with respect to claims 17 and 61, Applicants submit that Laakso and IEEE would not be obvious to combine. IEEE discloses a particular type of air interface used by fixed point-to-point broadband wireless access systems. The standard includes a particular physical layer specification (e.g., capacity requests, capacity grants, polling etc.). Contrary to the IEEE disclosure, Laakso discloses a method for traffic load control by manipulating power control commands not related to capacity grants. In particular, the traffic load control performed by Laakso does not take into account capacity requests, grants or polling. Therefore, a person having ordinary skill in the art would not have any motivation to combine these two references. Capacity load granting and power control are by their very nature not comparable features. Thus, independent claims 17 and 61 and those claims dependent thereon are not obvious over IEEE and Laakso.

Regarding claims 20, 25, 26 and 64, the Office Action agreed that the cited IEEE publication fails to disclose a processor configured to "allocate connection-specifically a capacity granted by a base station", as recited in claim 25. However, Applicants submit that Laakso fails to cure the deficiencies of IEEE with respect to the pending claims.

Laakso discloses a load control method that operates by controlling the load on a per base station sector basis by modifying transmit power commands (see Abstract of Laakso). Laakso's disclosed method for traffic load control includes setting a first

reference load value for the load of a respective cell, monitoring the load of the respective cell, and, in response to the load exceeding the first reference load value, manipulating the power control to decrease the transmission power levels in the cell (see paragraph [0010] of Laakso).

Laakso further discloses that the packet scheduling is adapted to schedule the transmission of data packets, which represent a non-real time traffic component within the network since the data packets can be transmitted at selectable times at which transmission capacity is available in the network. This traffic is also referred to as controllable user traffic. Non-controllable user traffic is referenced as real time traffic, such as, phone calls that cannot be controlled by a network controller (see paragraphs [0033]-[0034] of Laakso).

In order to reduce load, the load control method may deny or overwrite transmit power commands, reduce the target value of a signal-to-noise ratio (Eb/N0), throttle back non-real time traffic, lower the signal-to-noise ratio target for selected real-time users, lower bit rates of real-time users, stop transmission, perform and/or initiate a hand-over to another carrier, re-negotiate real-time services to lower bit rates, and drop calls (see paragraphs [0051]-[0059] of Laakso). Laakso discloses performing load control actions for diminishing the traffic load. Laakso does not disclose capacity allocation for generating or initiating traffic, but, instead is related to reducing traffic load.

Laakso does not disclose any load control actions being "connection-specific." By focusing on reducing the traffic load, Laakso teaches away from what is claimed in the

pending claims. Laakso simply fails to disclose or suggest a processor configured to "allocate connection-specifically a capacity granted by a base station", as recited in claim 25 and similarly recited in independent claims 20, 25, 56 and 64. Laakso is also silent about handling requests or requesting capacity in general. Thus, independent claims 20 and 64 and those claims dependent thereon are allowable over IEEE and Laakso.

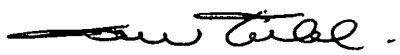
In light of the above, Applicant respectfully asserts that a combination of IEEE and Laakso fail to disclose or suggest all the limitations of independent claims 17, 20, 24-25, 56, 61, 64, and 66. Therefore, Applicant respectfully requests that the §103(a) rejection of independent claims 17, 20, 24-25, and 56 and related dependent claims be withdrawn.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 17, 18, 20, 24, 25, 56 and 58-62, 64-68 and 70-73 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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